

**Stream / Site / Date** \_\_\_\_\_

	Mean	S.D.	%Shade Cover		of 1020
Stream width- cm			Sinuosity		
Depth- cm			Elevation		
Velocity- cm/s			Slope %		
Maximum depth- cm			GPS	N	E
	Mean Percent	% w/zero	Temperature	pH	Conductivity
Embeddedness					
Herbaceous cover		1-3-5 scoring ranks	D.O.	Alkalinity	Turbidity
Woody cover					
herb cover =grass; woody cover =b+dt+et			N	TKN	P
Bank Cover:					
	%Stable		SO4	Hardness	SiO2
	%Eroded				
	%Open				
	% Vg	Bank Angle			% Riffle
	% Vb	%shallow			
	% Vt	% moderate			% Pool
	% Armored	% undercut			

**SUBSTRATE AND COVER**

% fines	% sand	% gravel	% cobble	% boulder	
% algae	% macroveg	% leaf	% wood	% roots	% detritus

**DISCHARGE:**

Transect	W/5*d1*v1	W/5*d2*v2	W/5*d3*v3	W/5*d4*v4	W/5*d5*v5	SUM = Q
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

MODE  
(10% bins)

MEAN  
SD

<b>FPOM</b> 1		<b>CPOM</b> 1	
2		2	
3		3	
mean		mean	
sd		sd	

<b>Chl a</b> 1	
2	
3	
mean	
sd	

**Laboratory Sample Processing and Identification Log** Watershed: \_\_\_\_\_

Stream Name	Site Name	Sample Date	Replicate #	Sorted by: (Initial)	IDed by: (Initial)	Sort check 1 of 5 by:	IDs check 1 of 5 by:	Number of Splits	Time Required to Sort (+date)	Error QC# & (#/n=%)
			1							
			2							
			3							
			4							
			5							
			1							
			2							
			3							
			4							
			5							
			1							
			2							
			3							
			4							
			5							
			1							
			2							
			3							
			4							
			5							
			1							
			2							
			3							
			4							
			5							













STREAM: \_\_\_\_\_ SITE: \_\_\_\_\_ DATE: \_\_\_\_\_ 2001

RIFFLE SERIES: \_\_\_\_\_ meters  
 POOL SERIES: \_\_\_\_\_ meters

Transects at 10 meter intervals along 150 meter reach

T	Stream Width	Bank Cover L	Bank Cover R	Angle Left	Angle Right	Densio. Left	Densio. Up	Densio. Down	Densio. Right	Rndm No.
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

GPS: \_\_\_\_\_ ELEVATION: \_\_\_\_\_

SLOPE(s):  
 stream length(s)                      upper level reading(s)                      lower level reading(s)

LINEAR DISTANCE ALONG 150 METER REACH LENGTH: \_\_\_\_\_ WATER CHEM. SAMPLED? \_\_\_\_\_

TEMPERATURE \_\_\_\_\_ pH \_\_\_\_\_ CONDUCTIVITY \_\_\_\_\_ D.O. \_\_\_\_\_ ALKALINITY \_\_\_\_\_

Surrounding RIPARIAN VEGETATION Cover (w/in 2 m of channel)  
 [descriptions of species present if known and sparse/common/ or dense]  
 [Sparse=<25%, Common=50%, Dense=>75%; S-C=25-50%, C-D=50-75%]  
 Herbaceous Cover \_\_\_\_\_  
 Woody Bushes \_\_\_\_\_  
 Deciduous Trees \_\_\_\_\_  
 Evergreen Trees \_\_\_\_\_

- ALGAE TYPE(s) Present:
- Diatom Film (olive green)
  - Filamentous Form (green)
  - Mat / Slime (blue-green)

PHOTOS: \_\_\_\_\_

## PHYSICAL HABITAT CODES

At each equidistant point along a transect (5 for streams more than 1 meter wide, or 4 for streams less than 1 meter wide), record depth (**D**) and current velocity (**V**) and substrate (**ST**) as coded below:

### SUBSTRATE SIZE CLASSES [=ST or SUBSTRATE TYPE]

**F** = FINES = < 1 mm

**S** = SAND = 1 - 3 mm

**G** = GRAVEL = 3 - 65 mm (6.5 cm)

**C** = COBBLE = 6.5 - 25 cm (2.5-10 inches)

**B** = BOULDER (or BEDROCK) = > 25 cm (>10 inches)

these may be associated with:

**V** = AQUATIC VEGETATION (emergent or submerged)

**A** = ALGAE (filamentous or slime/mat forms)

**W** = WOOD

**L** = LEAVES

**D** = DETRITUS (fine organic particles)

**R** = ROOTS (usually of emergent vegetation, sometimes riparian)

### Other Measures Along Transects:

**Stream Width** = wetted perimeter width of the stream (bank to bank water width)

**Bank Cover (L&R)** = types of cover or bank condition on each bank to the bankfull height.

Coded as the dominant substrate and condition:

(used to evaluate erosion potential or stability at edge of active stream channel)

[one of the first 3 may be combined with one or more of the second three]

**O** = open or exposed bank soils composed of finer or sand substrates

**V** = vegetated bank (grasses, bushes or shrubs, and trees growing in bank soils)

use veg. type categories also to classify main cover, **V<sub>G</sub>**=grass, **V<sub>B</sub>**=bushes, **V<sub>T</sub>**=trees

**A** = armored bank, with rocks or wood protecting the bank

**E** = eroded bank or erosion apparent

**I** = incised bank, vertical downcut along channel

**S** = stable bank, uneroded

Examples: **V<sub>G</sub>S**=grass vegetated stable bank, **OE**=open eroded bank, **OEI**=same but incised,

**AS**=stable bank armored by wood or rock, **VE**=bank vegetated but eroded

**Bank Angles** = angle formed by bank at the stream edge,

categorized as Shallow (<30° = **S**), Moderate to Steep (30° - 90° = **M**), or Undercut (>90° = **U**)

**Densimeter** = points where vegetation reflected in concave mirror at 17 total grid intersects

### Cobble Embeddedness:

That portion of a cobble-size rock buried in fine or sand particles and estimated as the percent volume of the rock buried (visual estimate). Often marked by a ring of particles at the burial line or by algae color on the upper exposed surface, or other discoloration, or by holding the rock at the point where the rock was excavated. Scored during the transect-point measures, with additional cobbles added if needed by choosing further random transects until a total of n=25 are sampled.

**Slope** is measured along known stream distance(s), sighting a level on a level rod (at least 75 m of reach).

**Linear distance** along reach is measured as the direct distance along the stream valley from the top of the reach to the bottom of the reach (used with total stream reach length = 150 m to calculate sinuosity of the channel).

STREAM: \_\_\_\_\_

SITE: \_\_\_\_\_

DATE: \_\_\_\_\_ 2001

T	D-1	V-1	ST-1	D-2	V-2	ST-2	D-3	V-3	ST-3	D-4	V-4	ST-4	D-5	V-5	ST-5
1															
2															
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COBBLE EMBEDDEDNESS MEASURES (n=25)				

Current Meter used and units:  
\_\_\_\_\_